NITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Offi-Address: COMMISSIONER FOR PATENTS

EXAMINER

P O Box 1450 Alexandria, Virgima 22313-1450 www.uspto.gov

NOTICE OF ALLOWANCE AND FEE(S) DUE

22850 7590 01/07/2010

OBLON, SPIVAK, MCCLELLAND MAJER & NEUSTADT, L.L.P.

HEINCER, LIAM J PAPER NUMBER ARTHNIT

1706 DATE MAILED: 01/07/2010

1940 DUKE STREET

ALEXANDRIA, VA 22314

APPLICATION NO. FILING DATE FIRST NAMED INVENTOR ATTORNEY DOCKET NO. CONFIRMATION NO. 10/574.774 05/01/2007 Nobuo Kaifu 289400US0PCT 2526 TITLE OF INVENTION: PROCESS FOR PRODUCING RESORCINOL-FORMALIN RESIN

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1510	\$300	\$0	\$1810	04/07/2010

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. <u>PROSECUTION ON THE MERITS IS CLOSED.</u> THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown

B. If the status above is to be removed, check box 5b on Part B -Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450

or Fax (571)-273-2885

appropriate. All further indicated unless corrects maintenance fee notifica	correspondence includired below or directed oth	ng the Patent, advance onerwise in Block 1, by (rders and notification of a a) specifying a new corre	maintenance fees wil spondence address; a	Il be mailed to the currend/or (b) indicating a	rent correspondence address as separate "FEE ADDRESS" for
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						(Depositor's name)
			_			(Signature)
APPLICATION NO.	FILING DATE		FIRST NAMED INVENTOR		ATTORNEY DOCKET NO. CONFIR	
10/574,774 TITLE OF INVENTION	05/01/2007 : PROCESS FOR PROE	DUCING RESORCINOL	Nobuo Kaifu FORMALIN RESIN		289400US0PCT	2526
APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE	FEE TOTAL FEE(S) I	DUE DATE DUE
nonprovisional	NO	\$1510	\$300	\$0	\$1810	04/07/2010
EXAM	INER	ART UNIT	CLASS-SUBCLASS	1		
HEINCEF	R, LIAM J	1796	528-129000	•		
"Fee Address" ind PTO/SB/47; Rev 03-0 Number is required. 3. ASSIGNEE NAME A	ondence address (or Cha 3/122) attached. ication (or "Fee Address 12 or more recent) attach ND RESIDENCE DAT/ less an assignee is ident h in 37 CFR 3.II. Comp	inge of Correspondence "Indication form and. Use of a Customer A TO BE PRINTED ON	(1) the names of up to or agents OR, alternati (2) the name of a sing registered attorney or 2 registered patent atte listed, no name will be THE PATENT (print or ty data will appear on the p T a substitute for filing an (B) RESIDENCE: (CTT)	vely, le firm (having as a r agent) and the names wheys or agents. If no printed. pe) satent. If an assigned assignment.	member a 2s of up to b name is 3	ne document has been filed for
Please check the appropr	iate assignee category or	categories (will not be p	rinted on the patent):	Individual Con	poration or other private	e group entity 🗖 Government
4a. The following fee(s) Issue Fee Publication Fee (N	o small entity discount p		b. Payment of Fee(s): (Ples A check is enclosed. Payment by credit can The Director is hereby overpayment, to Depo	rd. Form PTO-2038	is attached. e the required fee(s), an	fee shown above) y deficiency, or credit any se an extra copy of this form).
	s SMALL ENTITY state	as. See 37 CFR 1.27.	b. Applicant is no lon			
interest as shown by the	u runication ree (if req records of the United Sta	unea) will not be accepte ites Patent and Trademark	Office.	me applicant; a regist	cicu attorney or agent;	or the assignee or other party in
Authorized Signature				Date		
Typed or printed name			Registration No.			
This collection of inform an application. Confiden submitting the completes this form and/or suggesti Box 1450, Alexandria, V Alexandria, Virginia 223	ation is required by 37 C tiality is governed by 35 d application form to the ions for reducing this but friginia 22313-1450. DC 13-1450.	CFR 1.311. The informatic U.S.C. 122 and 37 CFR USPTO. Time will vary rden, should be sent to the ONOT SEND FEES OR	on is required to obtain or 1.14. This collection is es depending upon the indi- e Chief Information Offic COMPLETED FORMS T	retain a benefit by the timated to take 12 mi vidual case. Any con er, U.S. Patent and T O THIS ADDRESS.	e public which is to file inutes to complete, incl- aments on the amount of rademark Office, U.S. I SEND TO: Commissio	(and by the USPTO to process) uding gathering, preparing, and of time you require to complete Department of Commerce, P.O. mer for Patents, P.O. Box 1450,

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10/574,774	05/01/2007	Nobuo Kaifu	289400US0PCT	2526
22850	7590 01/07/2010		EXAMINER	
OBLON, SPIVA	K, MCCLELLAND	HEINCER, LIAM J		
1940 DUKE STREET ALEXANDRIA, VA 22314			ART UNIT	PAPER NUMBER
			1796	

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)

(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 0 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 0 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

Notice of Allowability

Application No.	Applicant(s)	
10/574,774	KAIFU ET AL.	
Examiner	Art Unit	
Liam I Heincer	1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--All claims being allowable. PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS. This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

- This communication is responsive to 10/15/09.
- The allowed claim(s) is/are 1-4,6-18 and 20-23.
- 3. Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) 🔯 All b) ☐ Some* c) ☐ None of the:
 - 1. T Certified copies of the priority documents have been received.
 - 2. Certified copies of the priority documents have been received in Application No. __
 - 3. \(\overline{\text{ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
 - * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

- 4. A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
- CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) Including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) hereto or 2) to Paper No./Mail Date
 - (b) including changes required by the attached Examiner's Amendment / Comment or in the Office action of

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6.

DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- 1. | Notice of References Cited (PTO-892)
- 2. Notice of Draftperson's Patent Drawing Review (PTO-948)
- Information Disclosure Statements (PTO/SB/08).
- Paper No./Mail Date 6/1/09
- 4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
- 5. Notice of Informal Patent Application
- Interview Summary (PTO-413), Paper No./Mail Date
- 7.

 Examiner's Amendment/Comment
- 8. X Examiner's Statement of Reasons for Allowance
- 9. Other _____.

/Mark Eashoo/

Supervisory Patent Examiner, Art Unit 1796

Application/Control Number: 10/574,774

Art Unit: 1796

Allowable Subject Matter

Claims 1-4, 6-18, and 20-23 are allowed.

The following is an examiner's statement of reasons for allowance: The prior art of record does not teach the claimed process or a product made by the claimed process. The closest prior art, Honda (JP 2003-277308) teaches a process comprising reacting resorcinol and formaldehyde in the presence of an inorganic salt that is preferably calcium chloride to reduce the molecular weight of the resorcinol resin (Example). Honda et al. is silent towards the use of organic solvents in the reaction medium or in the purification process. Further Honda et al. does not teach adding the catalyst after stirring the mixture at a liquid temperature not higher than the boiling point of the organic solvent to form two-phase system containing no remaining solid matter. While biphasic reaction mixtures (Yamaguchi et al.) and extraction with organic solvent (Honda et al.) are known in the art there is insufficient motivation to combine the references and arrive at the specific claimed process steps and amounts absent improper hindsight. Additionally, the claimed process produces a materially different product than the process of Honda. The process of the instant invention produces a different ratio of molecular weights than the resin of Honda (Table 1 vs. Fig. 1).

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Art Unit: 1796

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Liam J. Heincer whose telephone number is 571-270-3297. The examiner can normally be reached on Monday thru Friday 7:30 to 5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Eashoo can be reached on 571-272-1197. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Mark Eashoo/ Supervisory Patent Examiner, Art Unit 1796

LJH December 29, 2009